

## SECTION 26

## AGGREGATE BASES

Aggregate bases shall conform to the requirements of Section 26 of the Caltrans Standard Specifications and these City Standard Specifications.

**26-1.01 Description.** - Aggregate base classes are 1, 2, and 3 as specified in Subsection 26-1.02. The classes of aggregate base to be used in the work will be designated on the plans or in the special provisions.

**26-1.02 Materials.** - The use of recycled asphalt concrete and Portland cement concrete materials will be permitted provided that the Contractor submits to the Engineer certified test data that the proposed material meets all the quality requirements of this section and the Engineer approves its use in writing. Data shall be submitted at least 30 days prior to expected use of the proposed material in the work. Samples of proposed materials shall be submitted if requested by the Engineer.

**26-1.02A Quality Requirements.** - All classes of aggregate base shall be clean and free from vegetable matter and other deleterious substances, and shall be of such nature that it can be compacted readily under watering and rolling to form a firm, stable base.

Aggregate base shall conform to the quality requirements as specified in Table 1 for classes indicated. All classes of aggregate base shall have a maximum percentage of wear of 50 as determined by California Test 211, and a minimum Durability Index of 25 as determined by California Test 229 (see Note (c)).

**Table 1**  
**Quality Requirements**

Class	R-Value Calif. Test 301		Sand Equivalent Calif. Test 217		Crushed Particles % Calif. Test 205	
	Operating Range	Indiv. Test	Operating Range	Indiv. Test	Operating Range	Indiv. Test
1	-	78	50	45	(a)90	(a)87
2	-	78	30	28(d)	(b)25	(b)23
3	70	68	25	23	-	-

(a) Percent by weight

(b) Material retained on the No. 4 USA Standard sieve shall consist of material of which at least 25%, by weight, shall be crushed particles.

(c) For Class 3 Aggregate Base, the Durability Index requirement of 25 may be waived provided the material is lime treated with not less than 1% high calcium quicklime and has a minimum unconfined compressive strength of 200 psi when tested in accordance with California Test 373 and all other quality requirements met. Method of lime treatment must be approved by the Engineer.

- (d) With the approval of the Engineer, minimum sand equivalent may be reduced to 25 provided, the aggregate base is treated with not less than one half of one percent high calcium quicklime.

**26-1.02B Gradation.** - The percentage composition of aggregate base shall conform to the gradations as shown in Table 2 for the maximum size as specified on the plans or special provisions, when determined by California Test 202. When there is a difference in specific gravity of 0.2 or more, between the coarse and fine portion of the aggregate or blends of different aggregate, California Test 202 will be modified by California Test 905.

Table 2

USA Std. Sieve Size	Percentage Passing Sieves					
	1-1/2" Max.		1" Max.		3/4" Max.	
	Operating Range	Indiv. Test	Operating Range	Indiv. Test	Operating Range	Indiv. Test
2"	100	100	----	----	----	----
1-1/2"	90-100	88-100	100	----	----	----
1"	----	----	85-100	88-100	100	100
3/4"	50- 85	48- 88	60- 90	58- 93	90-100	88-100
No. 4	25- 45	23- 47	30- 50	28- 53	35- 55	33- 57
No. 30	10- 25	8- 28	10- 28	8- 30	10- 30	8- 32
No. 200	2- 9	1- 10	2- 9	1- 10	3- 9	1- 10

**26-1.03 Subgrade.** - Delete this subsection. Subgrade preparation shall be as specified in Section 21 of these City Standard Specifications.

**26-1.05 Compacting.** - Relative compaction shall be determined in accordance with California Tests 216, Part II and 231.

The finished grade of aggregate base, where not controlled by adjacent structures or features, shall not exceed 0.05 foot above or below the planned grade, provided it is uniform and free from sharp breaks. The cross-section of the finished base shall be free from ridges or valleys and be within 0.05 foot above or below the theoretical section shown on the plans at any point on the cross-section. Surfaces will be tested by a 16-foot straight edge applied parallel with and at right angles to the roadway center line. The Contractor shall furnish the straight edge for the Engineer's use, and it shall be of a type and in a condition approved by the Engineer.

Segmented or sheepfoot compactors will not be allowed.

**26-1.06 Measurement.** - Quantities of aggregate base to be paid for by the square yard will be calculated on the basis of the dimensions shown on the plans adjusted by the quantity of any change ordered. No allowance will be made for aggregate base placed outside such dimensions unless ordered by the Engineer.

**26-1.07 Payment.** - Quantities of aggregate base will be paid for at the contract price per appropriate unit of measurement, whichever unit is designated in the contract item, for the class or classes involved.